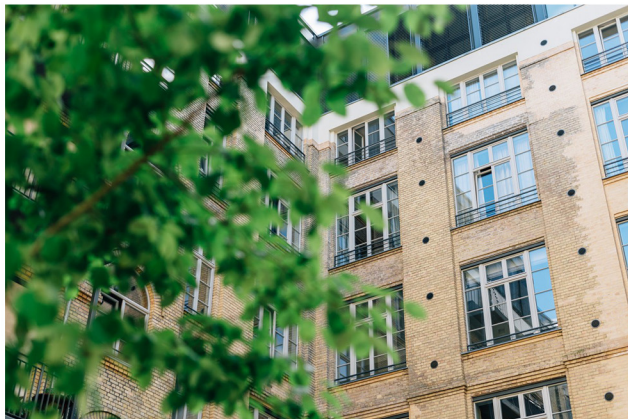


*Park Rx America is a 501(c)(3) non-profit charitable organization.*



## Moving from urban to greener areas was linked to improved mental health.

“On moving from urban to greener areas: “mental health improved within a year and stayed approximately the same for the following two years.”

Alcock I., White MP., Wheeler BW., Fleming LE., Depledge MH. Longitudinal Effects on Mental Health of Moving to Greener and Less Green Urban Areas. *Environmental Science & Technology* 1247-1255.

## Longer distances to green areas are associated with higher levels of stress.

“A stronger positive correlation between stress and distances to green areas is found when the distance is measured within the largest cities.”

*Study measured amount of stress and BMI in relation to green space*

Nielsen TS, Hansen KB. (2007). Do green areas affect health? Results from a Danish survey on the use of green areas and health indicators. *Health and Place*, 13(4):839-50.

## Nature helps to lessen to the negative impact of stressful life events.

“As shown in Figure 1, stressful life events have less impact on psychological distress under high nature conditions than under low nature conditions.”

Wells, N. M., & Evans, G. W. (2003). Nearby Nature A Buffer of Life Stress among Rural Children. *Environment & Behavior*, 35(3).  
<http://dx.doi.org/10.1177/0013916503035003001>

## Green spaces are restorative and boost attention, while viewing concrete worsens attention during tasks.

“The green roof scene was perceived by participants as more restorative, as well as boosting their attention compared to participants viewing the concrete scene, who showed worsening attention over the course of the task.”

*Study had participants look at nature for 40 seconds and attention boosts were measured*

Lee, K. E., Williams, K. J.H., Sargent, L. D., Williams, N. S.G., & Johnson, K. A. (2015). 40-second green roof views sustain attention: The role of micro-breaks in attention restoration. *Journal of Environmental Psychology*, 42, 182-189.  
<http://dx.doi.org/10.1016/j.jenvp.2015.04.003>

## Group walks in nature are significantly associated with lower levels of depression.

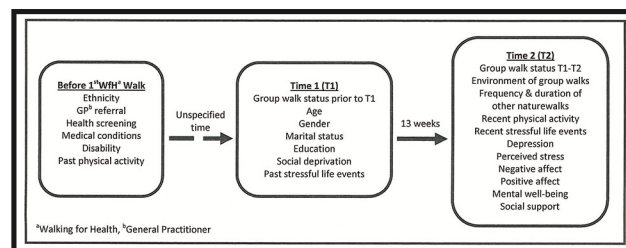
“Controlling for other significant predictors, group walks in nature were significantly associated with lower depression.”

Marselle Melissa R., Irvine Katherine N., and Warber Sara L. Examining Group Walks in Nature and Multiple Aspects of Well-Being: A Large-Scale Study. *Ecopsychology*, September 2014 DOI: 10.1089/eco.2014.0027

## Group walks in nature are associated with lower levels of stress and negative affect.

“Group walks in nature were significantly associated with less perceived stress and less negative affect.”

Marselle Melissa R., Irvine Katherine N., and Warber Sara L. Examining Group Walks in Nature and Multiple Aspects of Well-Being: A Large-Scale Study. *Ecopsychology*, September 2014 DOI: 10.1089/eco.2014.0027

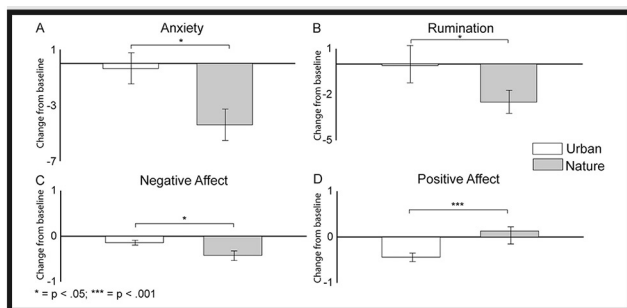


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## Spending time in nature is linked with decreased anxiety, rumination, and negative affect.

“Compared to urban experience, nature experience led to greater decreases in anxiety, rumination, and negative affect. Nature experience also maintained positive affect, compared to the drop in positive affect that resulted from urban experience.”

Bratman, G. N., Daily, G. C., Levy, B. J., & Gross, J. J. (2015). The benefits of nature experience: Improved affect and cognition. *Landscape and Urban Planning*, 138, 41-50. <http://dx.doi.org/10.1016/j.landurbplan.2015.02.005>



## Nature reduced rumination and subgenual prefrontal cortex activation.

“Nature experience reduced rumination and [subgenual prefrontal cortex] activation. Participants who went on a 90-min nature walk showed reductions in self-reported rumination and decreases in sgPFC activity, whereas those who went on an urban walk did not show these effects.”

Article states that “the sgPFC has been shown to display increased activity during sadness and the behavioral withdrawal and negative self-reflective processes tied to rumination in health and depressed individuals,” which is why the sgPFC is being referenced here

Bratman, G. N., Hamilton, J. P., Hahn, K. S., Daily, G. C., & Gross, J. J. (2015). Nature experience reduces rumination and subgenual prefrontal cortex activation. *Proceedings of the National Academy of Sciences of the United States of America*, 112(28), 8567-8572. <http://dx.doi.org/10.1073/pnas.1510459112>

## Physical activity in a natural environment is more beneficial on mental wellbeing than physical activity indoors.

“We found some evidence that physical activity in an outdoor natural environment may bring additional positive effects on measures of mental wellbeing that are not seen when participating in similar physical activity indoors”

Coon, J. T., Boddy, K., Stein, K., Whear, R., Barton, J., & Depledge, M. H. (2011). Does Participating in Physical Activity in Outdoor Natural Environments Have a Greater Effect on Physical and Mental Wellbeing than Physical Activity Indoors? A Systematic Review. *Environmental Science and Technology*, 45, 1761-1772. <http://dx.doi.org/10.1021/es102947t>

## Walking in parks improved focus in children with attention deficits.

“Children with attention deficits concentrated better after walking in a park than after either of two other settings. The effect of a dose of green was substantial—roughly as large as the deficit due to ADHD and roughly as large as the peak effect of extended-release methylphenidate. Children’s experience of the three settings showed the same pattern as their attention performance afterward.”

Taylor AF, Kuo FE. Children with attention deficits concentrate better after walk in the park. *J Atten Disord* 2009;12:402.

## Spending time with blue spaces is associated with fewer issues with peer relationships and more prosocial behavior.

“Annual beach attendance was negatively associated with the SDQ total difficulties score and with difficulty subscale scores (particularly peer relationship problems), and positively associated with the SDQ strength subscale score (i.e., prosocial behavior).”

Amoly, E., Dadvanda, P., Forns, J., López-Vincente, M., Basagaña, X., Julvez, J., Alvarez-Pedrerol, M., Nieuwenhuijsen, M. J., Sunyer, J. (2015). Green and Blue Spaces and Behavioral Development in Barcelona Schoolchildren: The BREATHE Project. *Environmental Health Perspectives*, 122(12). <http://dx.doi.org/10.1289/ehp.1408215>